

BMJ Open Medical students' experiences of the benefits and influences regarding a placement mentoring programme preparing them for future practice as junior doctors: a qualitative study

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ABSTRACT

Objective To study medical students' views and experiences of the benefits and influences regarding a mentoring programme aimed at preparing them for future practice as a doctor during their Obstetrics and Gynaecology (O&G) placement in a UK teaching hospital.

Design A qualitative approach, employing focus groups and thematic analysis.

Setting Single-centre UK Teaching hospital.

Participants Thirteen undergraduate medical students at the University of Southampton who had completed their standard 8-week placement in O&G and had been assigned a mentor throughout.

Main outcome measures Medical students' experiences and perceptions of the benefits and influences of having a mentor throughout their O&G placement.

Results From our data, four central themes were identified: integration, feedback, seniority and expectations. Students found mentorship useful for integration into the team, and an opportunity for constructive feedback on their clinical skills and professional skills for example, communication and team-working. Seniority and the level of contact of their mentor was the main reason for differing mentoring experiences: although senior mentors spent less time with their mentees, they were able to offer more careers advice. Students felt that the mentors and mentees were not always clear on the expectations of the mentoring programme.

Conclusions Mentorship may be a useful addition to help prepare students for future clinical practice. Mentor training may improve consistency of experiences. This study demonstrates that a mentoring programme is deliverable and widely accepted by medical students in a clinical placement such as O&G, and may have wider benefits if introduced on a regional/national level.

INTRODUCTION

Mentoring is traditionally defined as *a process whereby an experienced, highly regarded, empathetic person (the mentor) guides another (usually younger) individual (the mentee) in the development and re-examination of their own ideas, learning,*

Strengths and limitations of this study

- The study details student's experiences throughout their undergraduate placement with a mentor.
- The focus group approach has encouraged rich discussion among groups of medical students on their experiences.
- We have not explored longer term or continued relationship between mentors and mentees in this study.
- This study has been conducted in a single centre with small sample sizes and therefore structural and cultural components should be taken into account when extrapolating our findings to other settings.
- The mentoring programme and qualitative study was performed in a large teaching hospital where one-to-one mentoring is possible; a similar structure may not be feasible in smaller district general hospitals.

*and personal and professional development.*¹ It is commonly seen as career promotion strategy based on a personal relationship in a professional context and requires participation of both the mentee and the mentor. In contrast to the role of a tutor, teacher/educator, coach or supervisor who mainly focuses on promoting and supporting a junior's professional skills, a mentor is involved in an ongoing relationship with the mentee, to help them maximise his or her potential to reach personal and professional goals.² The mentoring relationship is dynamic, evolving over time, during which both parties continually define and redefine their roles. Clarity of purpose and intention is a vital aspect of any mentoring relationship.³ Commonly described benefits of mentoring include: empowerment in personal development, career advancement, improved knowledge and skills, increased confidence and sense of well-being.^{3,4}

Within medical education, the role of the mentor and the definitions of a mentor are evolving. Studies have shown that a mentor helps build rapport between staff and students, support students learning and prepares them for professional practice as future doctors or supervisors.^{5–8} The perceived effects of being a mentor are also correlated with how mentors understand their roles; in one qualitative study mentors saw themselves as being someone who can answer questions and give advice, share what it means to be a doctor, and someone who listens and stimulates reflection.⁹

In the Gallum-Purdue Index Report 2015,¹⁰ a comprehensive survey of 29 560 US college graduates showed that a supportive mentoring experience was strongly linked with better preparedness for life outside college. It suggests that universities should explore opportunities to foster formal and informal mentoring relationships.¹⁰ Although there is evidence showing that mentoring contributes to a successful and satisfying career in medicine,^{2 11 12} and better training outcomes for postgraduate trainees within the UK,¹³ there are still a lack of mentoring programmes for medical students in most countries, including the United Kingdom.¹⁴

At the University of Southampton, a mentoring programme has been introduced for fourth year medical students on their Obstetrics and Gynaecology (O&G) clinical placement in addition to the standard 'taught component'. The aim of the programme is to assist medical students who are coming towards the end of their undergraduate course to feel empowered to achieve set goals, to prepare for future practice as doctors and to guide them in achieving their potential in personal and professional development.¹⁵ In particular, the focus is to develop professional skills, for example in time management, communication and working within multidisciplinary teams, which are integral to practice in modern medicine and on which medical students are increasingly assessed.^{16 17} These requirements are highlighted in the graduate outcomes of the UK General Medical Council's document, *Outcomes for graduates*.¹⁸ Students on their O&G placement in Southampton were paired with a mentor, who is a doctor working within the specialty (from foundation year to senior registrar level) throughout their 8-week placement. The mentee and mentor met within the first week of their placement and the expectation was made clear to both parties that communication between mentor and mentees should be made on a regular basis and ideally at least once per week. It was also expected that students shadow their mentor during 'on-call' sessions.

The objective of this study was to assess medical students' experiences of the benefits and influences regarding a mentoring programme preparing them for future practice as junior doctors. This was performed in order to understand student's experiences of a potential mentoring model for other medical specialties or institutions.

METHODS

Mentoring programme

Medical students on an 8 week clinical O&G placement at Princess Anne Hospital were assigned to a mentor who is a doctor ranging from Foundation Year 1 (FY1) to Specialty Training registrar 7 (ST7) level (figure 1). All junior doctors (FY1 to ST7 level) on their O&G placement had the opportunity to volunteer to be a mentor. Mentors were not required to have received any formal training or have had previous mentoring experience, but they were given and expected to familiarise themselves with an eight page booklet titled 'The O&G Undergraduate Mentoring Programme' (online supplementary appendix 1). Within this, there is some background on mentorship and the O&G mentoring programme, student's views of the programme, roles of the mentor and mentee, and a mentoring agreement which both parties need to sign. The mentoring programme has been developed in line with the GMC guidance, to assist medical students in preparing for future practice as a doctor.¹⁵ The mentors were supported in their role by the O&G module lead throughout the mentoring process. The mentee and mentor were expected to meet within the first week of their placement. Within the initial meeting, they would discuss what the mentee wanted to achieve out of the placement and how the mentor could support them, how often and when they would like to meet, and their preferred method of communication. They were expected to communicate on a regular basis and mentees were expected to have a point of contact for their mentor, either email, phone or text messaging. Although the frequency of contact was not strict, it was preferred that face-to-face contact was made at least once per week. It was also expected that students shadow their mentor during 'on-call' sessions. If there were problems with contacting their mentor, students were expected to contact the O&G module lead. If that mentor was not available, arrangements were to be made for another mentor to be assigned.

Participant recruitment and screening

Participants for this study were recruited between February 2017 and August 2017. Fourth year medical students, enrolled with the University of Southampton, who had their 8 week clinical O&G placement at Princess Anne Hospital, part of the University Hospitals Southampton NHS Foundation Trust, were informed of the potential to partake in the study through an email sent to them after induction. Students were eligible to take part if they have completed their 8-week placement and if they had been assigned a mentor throughout their placement. Students were excluded from the study if they had a mentor who was also part of the research team carrying out this study. Those interested in taking part were invited to attend a focus group session.

Focus groups

The focus groups were conducted by co-authors KYBN and SL, neither of whom had any pre-existing relationship

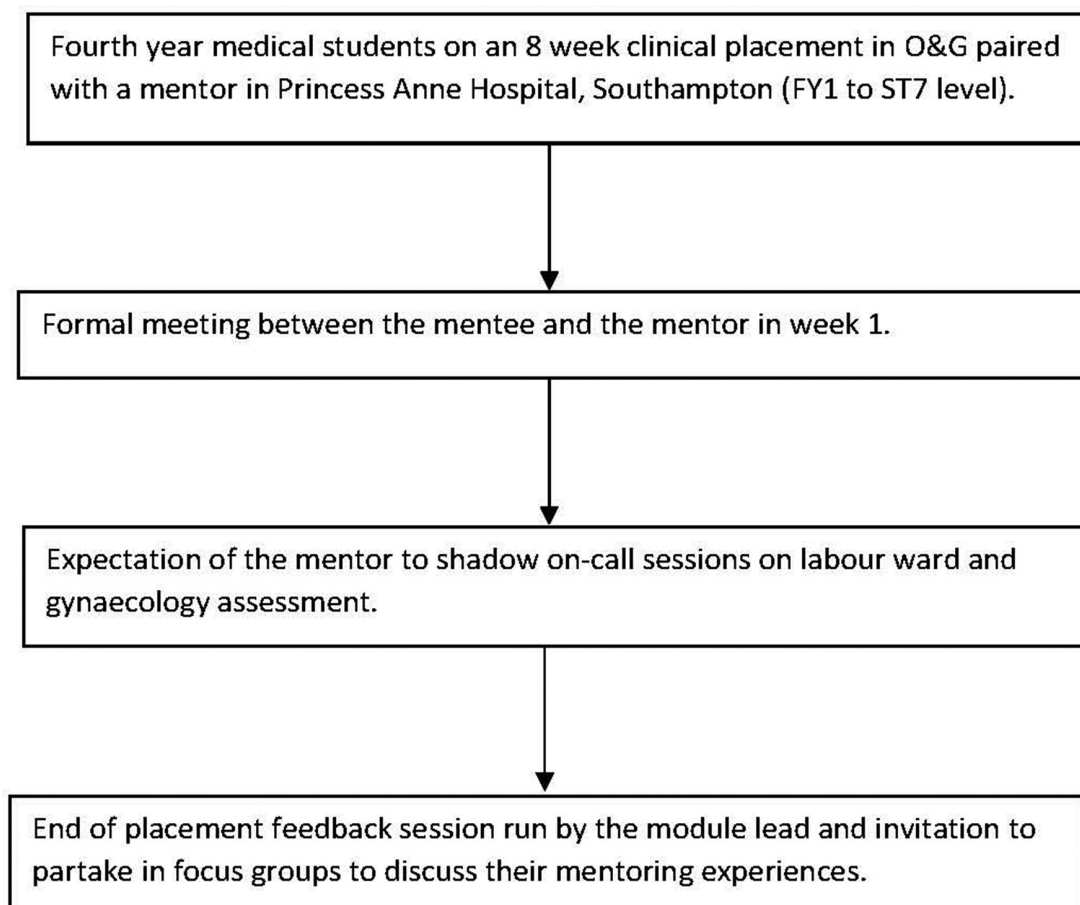


Figure 1 Flow diagram detailing the mentoring process on clinical obstetrics and gynaecology (O&G) placement.

with any of the participants. Prior to the focus group, the participants were asked to read the participant information sheet and had the opportunity to ask questions about the study, before providing their written consent.

A focus group schedule was developed by the authors after consulting medical students and reviewing the current literature in the field, and this was used to guide the discussion in the focus groups, rather than used as a verbatim script. The schedule was semi-structured, focusing on four main areas: (1) contact with the mentor, (2) quality of the mentor, (3) experiences and learning opportunities and (4) on-call sessions. Within these sections, it was expected that the students interviewed would cover experiences of the benefits and influences regarding the mentoring programme. There was a considerable amount of overlap between the different sections, and the topics and direction of the discussions were mainly guided by the participants' responses to the previous question. Open questions were used to explore further the participant's perspectives where appropriate. To conclude the focus group, the participants were asked if they had anything they would like to add to the discussions regarding the mentoring programme offered to them at Princess Anne Hospital or other mentoring programmes they have had experience with. There were three focus groups, with between three to six students in each group. Each focus group session lasted between 50

to 65 min, and allowed opportunity for in depth discussion between the participants. Those participants who were less verbal were also invited and encouraged to contribute to the discussion. During the focus groups, if the topics of discussion were irrelevant for the study, the authors would guide the students by asking specific questions from the semi-structured schedule. Focus groups were conducted until data saturation was reached.

The participants consisted of 13 undergraduate medical students. The age of the participants varied from 21 to 26 years old, with a mean age of 22.6 years, 62% (8/13) were women and 38% (5/13) were men, 8% (1/13) had already obtained a higher degree in a subject other than medicine.

Ethics approval

This study received local University of Southampton ethics approval through Ethics and Research Governance Online (ERGO) (ERGO ID 24602).

Data analysis

The focus groups were digitally recorded, transcribed verbatim by PageSix UK transcription services and verified for accuracy. Qualitative analysis was performed by an inductive thematic analysis approach, whereby the analysis was led by the content of the transcripts rather than pre-defined categories or theoretical frameworks.^{19–21}

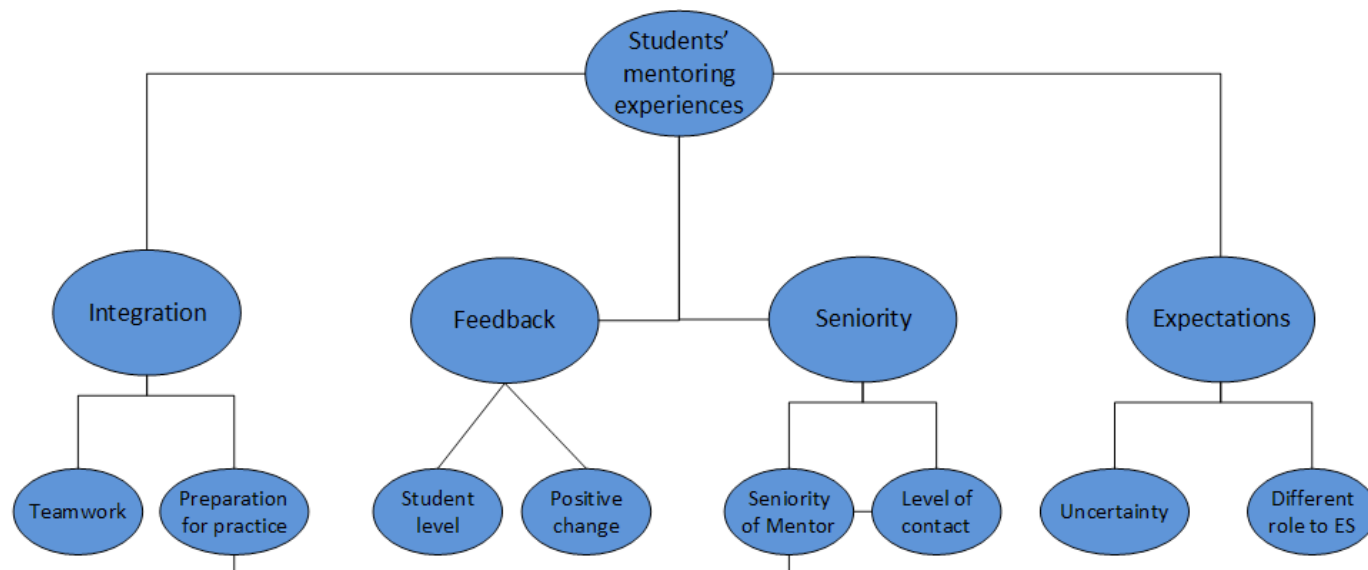


Figure 2 Theme MAP showing the four main themes of the thematic analysis; integration, feedback, seniority and expectations. ES, educational supervisor.

Each transcript was read for familiarisation and notes of initial possible categories were made. A total of 18 higher order categories were assigned to the text by KYBN and SL and N-vivo 11 software was used to manage our data.²² The content of transcripts were coded according to these categories.

Development of the coding frame and initial analysis was carried out by KYBN and SL and these findings were discussed with OM, the lead for undergraduate O&G at the University of Southampton. Based on these discussions, the analysis was further refined and a final model organising identified themes was developed. Data saturation was confirmed at the point of analysis when no new codes occurred in the data.²³

RESULTS

Four main themes were identified from the inductive thematic analysis of our data: integration, feedback, seniority and expectations (figure 2 shows theme map).

Integration

Medical students attached to a mentor during their clinical O&G placement generally felt welcomed, recognised and respected as a team member, rather than being someone at the *bottom of the hierarchy*. Commonly, medical students on medical and surgical placements feel as though *they are a hindrance*, and having a mentor helped improve their experience. As one student said:

Well there's the eternal med student problem of just trying not to get in the way, clutter the place up. And I feel like having a mentor to get your foot in the door a little bit, definitely helps with that. Because, from what I hear, they (medical students) are floating quite aimlessly about from one place to another.

Male, paired with mentor ST1 level, focus group 1

Integration into the team was improved when the students felt *less intimidated*, were *more involved* and when they had reliable support in an unfamiliar and potentially hostile environment. As one student said:

She (my mentor) would always, introduce me to her team. And because you feel less intimidated, and they're closer to your level, and age...you, kind of, get on with them a bit better, and so, you are more integrated in a team, whereas, I don't want to paint consultants as all nasty, horrible people, but it's always more intimidating from a student, in that kind of scenario, to build up any kind of personal relationship.

Female, paired with mentor FY2 level, focus group 3

Having a mentor was also beneficial for the students to have someone to talk to for clarification, especially when the rest of the team were busy. In handover and on ward rounds, students appreciated having their mentors there to explain the medical phrases or acronyms used within the O&G specialty. While in the operating theatre, it was evident that mentors talked to their students about the surgery so they could be shown the anatomy and understand what was happening at each step. Students enjoyed the opportunity to ask their mentor questions about the surgery without being *worried about disrupting the consultant, the main surgeon or scrub nurses*. Students thought that having a mentor meant that they could also be much more involved in theatre, and had more opportunities to scrub up and assist in theatre, *rather than be at the bottom of the pecking list*. One student talked about how her mentor improved her learning experiences in an obstetric emergency, when a post-partum haemorrhage occurred:

... a lot of people came into the room at that time, and so, it was all quite hectic. And my mentor was there,

and at that time, she just, sort of, took me just to the side of the room, and quite quickly explained everything that was going on, which was really helpful...

Male, paired with mentor ST2 level, focus group 3

Some students felt that having a mentor increased their drive and motivation to attend clinical sessions, and when there was a mentor to spend their clinical placement with, they *felt more enthusiastic to come in*. Having a familiar face to bond with was also important in terms of doing on-calls, especially during night shifts. As one student said:

I feel like a night's quite intimidating if you don't have a mentor, because you're just wandering round the hospital at night not really knowing who anyone is! ...it's so lonely, not having a mentor to do a night with.

Male, paired with mentor ST3 level, focus group 1

Students compared this placement to others where there was no mentoring programme and made inferences to how a similar programme may help in other clinical specialties to prepare for practice as a foundation year doctor, as well as facilitate learning and integration into the team. Students found it useful to be able to discuss practical things *on the job* that they do not formally get teaching on, for example, *how to request a chest x-ray or speak to the radiologist and request a CT scan*.

Feedback

Medical students were encouraged to shadow their mentors during 'on-call' sessions and had many opportunities to take histories and examine patients with their mentors. Students valued mentors observing their clinical communication and performance in a real life setting and being able to receive informal one-to-one feedback. Students felt that they received constructive feedback on clinical procedures, such as catheterisation, cannulation and venepuncture. One student gave an example of them being involved in a scenario and then receiving one-to-one feedback:

I followed her (my mentor) when she was on call and we had a trauma case over at SGH (Southampton General Hospital), at the neuro-centre, a female had had a stroke but was also heavily pregnant. And it was with her that I took the history from the mum of the daughter who had the stroke... I'd never taken a history from someone in such an acute, emotive setting before so that was really interesting and also just to be part of that wider team and be given a role ...most of the people I clerked, was when I was, actually, with my mentor...

Female, paired with mentor ST5 level, focus group 1

As well as feedback on clinical skills including history taking and examination, mentors also gave feedback relating to professional skills including professionalism, organisation, time management and prioritisation skills.

For example, one student received feedback relating to his image and organisation skills:

I've been told I've been disorganised before. I've not been asked if there's anything going on in my personal life that's made it quite this bad, before! ... But I think that was a bit of... thought sharing! I've never been told I seemed disinterested to the point of, 'Do you want to be here?'

Male, paired with mentor ST1 level, focus group 1

Following on from the feedback, students were able to reflect and make positive changes which would be applicable to other aspects of learning and professional development. This particular student now keeps a journal and a diary, which helps him with organisation and time keeping. He also made an effort to go out and buy new shoes to improve his image and professionalism.

Seniority

The seniority of the mentor was a key factor influencing student's experience of the benefits of the mentoring programme. The medical students on their O&G placement were assigned mentors of differing levels of seniority, from Foundation Year one doctor level to Specialist Registrar level, ST7 level. Those placed with more senior mentors had perceived benefits such as more experiences and learning related to the O&G specialty and their mentors were perhaps more equipped to offer careers advice to those interested in the specialty. In comparison, mentees paired with more junior doctors had more experiences related to the expectations and jobs of a Foundation Year doctor or senior house officer.

Students who were mentored by more junior members of the team, such as foundation year doctors, recognised the mentoring programme as a *conduit between a medical student and a junior doctor*. One student emphasised how this mentoring programme was helpful for medical examinations, which is now more orientated towards requirements of a junior doctor *on-the job*, which is a skill set that is more difficult to formally 'teach'. As one student said:

Southampton University have had a change in the exam structure...we've got a new type of exam which is a much more practical-based exam, so for example it's... one could be prioritising jobs, two is writing a discharge summary or, like, asking for x-rays and stuff. So, like, that even puts more pressure that we really should be with the junior members of the team. I think one of the problems with seeing consultants quite a lot, is the way they're expected to manage a situation, is not how we're going to be expected to manage a situation when we graduate.

Female, paired with mentor FY1 level, focus group 1

Students that were paired up with more senior mentors seemed to spend less time together and students speculated that senior doctors had more overall responsibilities,

meaning that their clinical duties may have impacted on the level of support they could offer to their mentees.

Expectations

Although the mentors and the students were given guidance on the mentorship programme and the structure of the meetings, they seemed to be unfamiliar with their roles and did not really know what was expected. Students felt that they would have benefited from more guidance, support and objectivity for the mentors and mentees. As one student said when they were asked what they expected from the mentorship programme:

I don't know! I guess... someone who you can shadow but also allows you to do more as well. And kind of supervise you while you're trying to learn new stuff...

Female, paired with mentor FY2 level, focus group 1

I suppose I kind of expected to be told when we could do the on-call shifts and things like that and be advised on how to get the most out of the placement. That was all, really.

Female paired with mentor ST6 level, focus group 2

Mentors were generally guided by what the mentees wanted to achieve out of the sessions spent together. Students felt that the mentors were flexible and adaptable to their needs for learning. Students expected flexibility in the number of meetings with their mentor, and felt that the level of contact should be left to the preferences of the mentor and mentee.

Students expected and appreciated that the role of their mentor was distinct from the role of their clinical or educational supervisors. Although the clinical supervisor is expected to examine the students, perform assessments of clinical competence, and complete the 'sign-off' for their clinical placement, students felt that their supervisor's role was not to mentor and having a separate junior colleague as a mentor offered complimentary educational opportunities.

There was an overall expectation that the mentoring should allow preparation for 'life as a junior doctor'. As one student said:

At the end of the day... one of the aims of the placement is to prepare you to be like a Junior Doctor. That's what you're going to be doing most of your time, not sitting in on urodynamics, or something!

Male, paired with mentor ST7 level, focus group 3

DISCUSSION

Our qualitative study suggests that a mentoring programme on clinical placement in O&G can be delivered and is acceptable among our cohort of medical students placed in a large UK teaching hospital. Students recognised and appreciated many benefits of having a mentor: it facilitates integration with the team and allows direct feedback from their mentor 'on-the-job'. The experience of

the mentee seemed to be significantly influenced by the seniority of their mentor, which in turn affects the level of contact between the mentor and mentee.

Mentoring for medical students is an important career advancement tool.^{24 25} It has been shown to foster interest within a medical specialty for which a future shortage is projected.^{25 26} There is evidence to suggest that mentoring is more effective when the mentor is closer to the level of the mentee and not someone who is higher up in the organisational hierarchy.²⁷ In our study, the more senior mentors seemed to have less time to spend with their mentees, which may have affected student's learning opportunities, motivation and satisfaction with the programme. However, it is evident that the senior mentors, already within the O&G specialty were able to offer more careers advice for the students compared with those who were foundation year doctors.

Mentoring plays an important role in the development of professionalism and personal growth and to ensure well-being of students.²⁸ It is evident from our students' perspectives and experiences that this cannot be obtained from clinical supervision alone, especially if the clinical supervisor is very senior in their post. These are clearly distinct roles; an educational or clinical supervisor focuses on education planning and goal setting against required training elements (which will involve assessment of performance), whereas a mentor encourages personal development and offers psychological support in a longitudinal relationship.²⁹ Students generally felt more comfortable to approach their mentors for personal and pastoral support and they spent more time and were able to develop relationships with their mentors.

The transition from a medical student to a junior doctor is an important period of change, dealing with new responsibilities, uncertainties and working in multidisciplinary teams which can be associated with high levels of stress and burnout.³⁰ One recent review has demonstrated that educational interventions are needed to address particular areas of unpreparedness, including multidisciplinary team working, prescribing and clinical reasoning.³¹ Although there have been some attempts to address preparedness to work as a junior doctor, such as a period of shadowing for final year medical students prior to them starting their foundation year one jobs,³² there remains a need for earlier exposure to clinical environments and opportunities where the student can 'act up' as a junior doctor.³⁰ Our mentoring programme, if introduced more widely in other specialties as well as O&G, may assist with this. Mentees are able to learn and receive feedback in a supported environment, and observe how a foundation year doctor is expected to deal with difficult situations with patients or other healthcare team members, prioritise and manage time effectively.

It is important to consider that the findings from our study rely on accounts given by the students rather than actual observation of the mentorship interactions. Although a small sample size, our study was performed until data saturation and this may have been assisted by

having a semi-structured interview schedule. A mentor is usually involved in an ongoing relationship with the mentee, to help them maximise his or her potential to reach personal and professional goals²; however we have not explored this longer term or continued relationship between mentors and mentees in this study. It may be useful to ascertain whether mentoring relationships are still present after their O&G placement had completed. The mentoring programme and qualitative study was also performed in a large teaching hospital where one-to-one mentoring is possible; a similar structure may not be feasible in smaller district general hospitals. Analysis of mentor's perceptions of the mentoring experience would be useful to further strengthen this study.

We found variation in mentoring experiences and while natural variation and diversity is welcomed and expected, mentor training may address some of the issues that were raised by the students, for example, with regards to mentor and mentee expectations and commitments. Before consideration of introduction of this mentoring programme to other specialities or other teaching hospitals, training for the mentors may improve consistency of mentoring experiences. It is also important to note that the researchers performing the focus groups were also involved in the development of the mentoring programme, so there may be subconscious bias which may have skewed the student's responses. Any mentee who had been paired with a mentor who was a facilitator for the focus groups were excluded from the study for this reason.

CONCLUSIONS

Mentorship may be a useful addition to integrate within clinical placements to help improve satisfaction of training and to help prepare students for future clinical practice. Besides its value in facilitating the development of the requisite clinical knowledge and skills, it could be even more useful in the acquisition of important professional skills such as communication and interpersonal skills, prioritising clinical workload and working within multidisciplinary team structures. These are invaluable skills vital to the practice of clinical medicine, and mentoring may facilitate that transition from today's medical students to tomorrow's doctors. Mentor training may improve consistency of mentoring practice and thus student experiences. This study demonstrates that a mentoring programme on clinical placement in O&G can be delivered and is acceptable among students placed in a large UK teaching hospital. It may have wider benefits if introduced in other specialties or on a regional/national level. However, further exploration of mentoring is required in other tertiary hospitals and in other specialties to show that the acceptability among students extends beyond the field of O&G.

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Contributors KYBN and OM conceived and designed the study. KYBN obtained ethical approval for the study. KYBN and SL conducted the focus groups and collected the qualitative data. KYBN and SL performed the initial data analysis, and this was then reviewed by all authors, KYBN, SL, JK and OM. KYBN wrote the paper and all authors, KYBN, SL, JK and OM contributed to the final version of the paper.

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Data availability statement Data are available upon reasonable request. Further anonymised qualitative accounts may be available upon reasonable request by emailing the corresponding author.

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